IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Re: Appeal to the Board of Patent Appeals and Interferences

Appellants: JOSE MALDONADO PACHECO et al.	)	Attorney Ref.: KCX-1291 (20006)
	)	Examiner: Barbara J. Musser
Serial No: 10/743,245	)	Group Art Unit: 1733
Filed: 12/22/2003	)	Deposit Account No: 04-1403
Confirmation No: 6968	)	Customer No: 22827

Title: EXTENSIBLE AND STRETCH LAMINATES AND METHOD OF MAKING SAME

APPLICANTS' COMPLIANT ORIGINAL APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants hereby submit the compliant original appeal brief responsive to the Notification of Non-Compliant appeal Brief mailed on October 6, 2008. The compliant appeal brief responds to the Examiner's February 22, 2008, Final Action in accordance with 37 CFR § 41.37 for the subject application.

1. REAL PARTY IN INTEREST:

The real party in interest is Kimberly-Clark Worldwide, Inc., the assignee of the Applicants' entire right title and interest.

2. RELATED APPEALS AND INTERFERENCES:

None.

3. STATUS OF CLAIMS:

Applicants appeal the rejections of claims 1-20, which are under final rejection mailed on February 22, 2008. Claims 21 – 26 are withdrawn from examination.

4. STATUS OF AMENDMENTS:

The claims were last amended in January 2008, in response to the non-final office action mailed on October 3, 2007. The claims have not been amended subsequent to the final rejection mailed on February 22, 2008.

SUMMARY OF CLAIMED SUBJECT MATTER:

Claim 1 is an independent claim on which claims 2 – 14 depend.

As explained in applicants' specification page 1, lines 5 – 6 and FIGs. 1 – 4, claim 1 pertains to a method of producing a laminate material.

The first step in the method of claim 1 is "providing a first flexible sheet material."

As explained at page 13, lines 3-24, one of the flexible sheet materials used in the formation of a laminate is nonwoven webs. As explained at applicants' specification at page 13, line 34 through page 14, line 6 and FIG. 1, a nonwoven web 710 is formed by feeding extruders 712 from polymer hoppers 714 and forming continuous filaments 716 from filament formers 718 onto web former 720.

The next step in the method of claim 1 is "providing a second flexible sheet material having a first surface and a second surface."

As explained at page 13, lines 25-29, another of the flexible sheet materials used in the formation of a laminate is polymeric films. As explained at page 14, lines 7-8 and FIG. 1 of applicants' specification, a film 728 is formed by feeding extruder 730 from polymer hopper 732 and casting onto chill roll 733.

The next step in the method of claim 1 is "providing a forming surface having grooves formed therein." One example of a forming surface is shown in FIG. 3 and described at page 2, lines 33 – 34 and at page 14, line 28 through page 15, line 18 of applicants' specification in the form of an anvil roll 200 that includes grooves 202.

The next step in the method of claim 1 is "providing a plurality of mating surfaces having fins positioned to fit within the grooves of said forming surfaces." As shown in FIG. 3 and described at page 15, lines 10-14, the satellite rolls 204, 206 have grooves 208 and 218, respectively, that fit within the grooves 202 of the forming surfaces formed by the anvil roll 200. As shown in FIG. 4 and described at page 15, lines 33-34, the grooves 502 of the forming surfaces formed by the anvil roll 500 intermesh or accommodate the fins 610 between the grooves 508 of satellite roll 504.

The next step in the method of claim 1 is "forming successive nips between the forming surface and the mating surfaces wherein the fins of the mating surfaces enter the grooves of the forming surface at separate locations on the forming surface."

As shown in FIG. 3 and explained at page 15, lines 10-28, the satellite roll 204 defines a fin that enters the groove 202 of the anvil roll 200 at a separate location from where the satellite roll 206 enters the groove 202 of the anvil roll. As shown in FIG. 4 and explained at page 15, lines 29-34, successive nips are formed between the forming surface and the mating surfaces where the fins of the mating surfaces enter the grooves at separate locations on the forming surface. See also page 24, lines 3 – 10 and page 26, lines 2 – 4 of applicants' specification.

The next step in the method of claim 1 is "feeding said first flexible sheet material into the successive nips while maintaining the position of said first flexible sheet material with respect to said forming surface."

As explained at page 24, lines 3 – 5 of applicants' specification:

> A fibrous nonwoven web was unwounded with a 9.5 Psi unwind tension and then introduced into a nip of intermeshing grooved steel rolls at a velocity of 99 meters/min (325 ft/min).

As explained at page at page 16, lines 28-29, "the effectiveness of the use of grooved rolls can be increased through control of the tension of the nonwoven web * * * *." As explained at page 16, lines 34-36 of applicants' specification, the effectiveness of the incremental cross-machine direction stretch is increased by maintaining machine direction tension of the nonwoven web as the nonwoven web passes through the

grooved roll apparatus. As explained at page 16, line 34 through page 17, line 1 of applicants' specification:

> By maintaining machine direction tension of the nonwoven web as the nonwoven web passes through the grooved roll apparatus, the effectiveness of the incremental cross-machine direction stretch is increased. When there is slack in the nonwoven web the web can freely move across its width to some degree.

As explained at page 17, lines 5-12:

> When tension is maintained in the machine direction of the nonwoven web, the web will have less ability to "slip" in the cross-machine direction. The tension in the machine direction can be maintained with the use of an S-wrap place in the web path prior to the grooved roll apparatus and/or through the use of tension unwinds. When tension is maintained the nonwoven web then can be incrementally stretched to greater degree between the ridges of the fins of the grooved rolls than when the nonwoven web is not held in tension. With higher levels of web tension, the incremental cross-machine stretching will become more effective.

See also page 24, lines 12 – 14 of applicants' specification. Absent this machine direction tension, the web is not fully stretched between the ridges of the fins of the grooved rolls and instead the nonwoven web slips between these same ridges, and as the web slips to conform to the contours of the surfaces of the grooved rollers, the width of the nonwoven web decreases.

The next step in the method of claim 1 is "stretching said first flexible sheet material a plurality of times along lines on the first flexible sheet material by the fins entering the forming surface grooves along with said first flexible sheet material within successive nips." The explanation of this step is provided in the explanation below for the similar step for claim 15.

The next step in the method of claim 1 is "applying adhesive directly to said stretched first flexible sheet material with a slot coat adhesive process." The explanation of this step is provided in the explanation below for the similar step for claim 15.

The final step in the method of claim 1 is "joining the stretched first flexible sheet material in a face to face configuration to the first surface of the second flexible sheet material." The explanation of this step is provided in the explanation below for the similar step for claim 15.

Claim 15 is an independent claim on which claims 16 – 20 depend.

As explained in applicants' specification page 1, lines 5 – 6 and FIGs. 1 – 4, claim 15 pertains to a method of producing a laminate material.

The first step in the method of claim 15 is "providing a first flexible sheet material." The explanation of this step is provided above in the explanation of the same step for claim 1.

The next step in the method of claim 15 is "providing a first flexible sheet material." The explanation of this step is provided above in the explanation of the same step for claim 1.

The next step in the method of claim 15 is "providing a second flexible sheet material having a first surface and a second surface." The explanation of this step is provided above in the explanation of the same step for claim 1.

The next step in the method of claim 15 is "providing a forming surface having grooves formed therein." The explanation of this step is provided above in the explanation of the same step for claim 1.

The next step in the method of claim 15 is "providing a plurality of mating surfaces having fins positioned to fit within the grooves of said forming surfaces." The explanation of this step is provided above in the explanation of the same step for claim 1.

The next step in the method of claim 15 is "forming successive nips between the forming surface and the mating surfaces wherein the fins of the mating surfaces enter the grooves of the forming surface at separate locations on the forming surface." The explanation of this step is provided above in the explanation of the same step for claim 1.

The next step in the method of claim 15 is "feeding said first flexible sheet material into the successive nips while maintaining the position of said first flexible sheet material with respect to said forming surface." The explanation of this step is provided above in the explanation of the same step for claim 1.

The next step in the method of claim 15 is:

> stretching said first flexible sheet material a plurality of times in the cross-machine direction along lines on the first flexible sheet material by the fins entering the forming surface grooves along with said first flexible sheet material within successive nips, such that the resulting stretched first flexible sheet material has a corrugated surface comprised of a series of surface contacting peaks separated by recessed troughs therebetween;

As shown in FIG. 1 and explained at page 14, lines 4-6 of applicants' specification, the first flexible sheet material is stretched a plurality of times in the cross-machine direction by the fins of the satellite roll 743, 744, 747 and 745 entering the forming surface grooves of the anvil roll 742 within successive knits. This successive stretching a plurality of times in the cross-machine direction also is explained at page 15, lines 19 – 25 as follows (emphasis added):

> As shown in Fig. 3, the **anvil roll 200 is engaged by satellite rolls 204 and 206** which operate to apply a stretching force to a laminate (or nonwoven support material) **as the laminate passes through each of the nips formed between the anvil and satellite rolls**. In this case, the grooves of one of the satellite rolls extend into mating grooves of the anvil roll to a lesser extent than do the grooves of the other satellite roll. In this manner, stretching forces applied to the laminate may be gradually increased so that there is a reduced tendency to tear or otherwise damage the laminate and yet stretch to a high degree.

Furthermore, as explained at page 14, lines 20-24 (emphasis added):

> FIG. 2 is a representation of a cross-sectional view of the material laminate produced by the inventive method as illustrated in FIG. 1. When the first flexible sheet material 50 is stretched by the satellite groove roll stretching unit 711, the **corrugated surface of the first flexible sheet material 50** will be made up of a series of **alternating surface contacting peaks 52 and recessed troughs 54 between the peaks 52**.

Thus, depending upon the number of times the first flexible sheet material is stretched in the cross-machine direction, the resulting stretched first flexible sheet material takes on a corrugated surface that is comprised of a series of surface contacting peaks separated by recessed troughs therebetween.

The next step in the method of claim 15 is:

> applying adhesive directly to said first flexible sheet material with a slot coat adhesive process, where the adhesive is applied substantially to the surface contacting peaks of the first flexible sheet material;

As shown in Fig. 1 and explained at page 14, lines 4-7 of applicants' specification, after the web 710 is stretched in the roll stretching unit 711 between the grooved anvil roll 742 and the satellite rolls 743, 744, 747 and 745, an adhesive is applied to the web at the adhesive station 734. As explained at page 18, lines 23-29, the adhesive bond system 734 in Fig. 1 (emphasis added):

> may be a spray or a **slot coat adhesive system**. Such slot coat adhesive systems are available from the Nordson Corporation, of Luneburg, Germany. For example, an adhesive applicator dye is available from Nordson under the designation BC-62 Porous Coat® model. Such a dye may be held on a coating stand such as the NT 1000 Series Coating Stand. It has been found that slot coating adhesive processes provide for more uniform adhesive coverage, over a wide range of adhesive viscosities.

As further explained at page 19, lines 4 – 6 (emphasis added):

> Alternately, when **slot coat adhesive processes** are used, the **adhesive is placed at discrete points on the grooved nonwoven web 50**. The adhesive 36 is placed **on the peaks 52** of the grooved nonwoven 50 and not in the troughs 54.

As explained at page 19, lines 26 – 31, controlling adhesive characteristics and the nip pressure and the degree of processing of the grooved nonwoven insures that the adhesive will stay primarily on the peaks throughout processing of the laminate. As further explained at page 20, lines 19-20, "slot coat adhesive processes place the

adhesive only on the peaks of the grooved nonwoven as opposed to the entire surface of a non-grooved nonwoven."

The final step in the method of claim 15 is:

> joining the stretched first flexible sheet material in a face to face configuration to the first surface of the second flexible sheet material at the discrete points where the surface contacting peaks of the first flexible sheet material contact the first surface of the second flexible sheet material.

As shown in Fig. 1 and explained at page 14, lines 6-10, after the web 710 is passed through the stretching unit 711 and provided with adhesive at the web adhesive station 734, the film 728 is combined with the nonwoven web at nip 736 between rolls 738, 740.

As shown in Fig. 2 and explained at page 14, lines 24 – 27 (emphasis added):

> Ideally, the first flexible sheet material 50 will be attached to the second flexible sheet material 10 with the adhesive 36 **only at the discrete points where the peaks 52 of the first flexible sheet material 50 contact the second flexible sheet material 10**.

As explained at page 19, lines 13-16 (emphasis added):

> When the grooved nonwoven with slot coat adhesive is bonded to a polymeric film, the **bonding occurs merely between the film 10 and the discrete points where the grooved nonwoven 50 meets the film 10**. The extensibility of such a laminate made with slot coat adhesive is greater than that of a similar laminate made with spray adhesive.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL:

The final rejections of claims 1-11 and 13-20 under 35 U.S.C. § 103(a) as being unpatentable over Dobrin et al (USP 6,383,431) in view of Weber et al (USP 5,143,679) and Boger et al (USP 4,874,451).

The final rejection of claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Dobrin et al, Weber et al and Boger et al, as applied to claim 1, and further in view of Morman et al (U.S. Publication 2002/0119288A1).

7. ARGUMENT:

A. Claims 1 – 11 and 13 – 20 are patentable under 35 U.S.C. § 103(a) over Dobrin et al in view of Weber et al and Boger et al

Referring to the disclosure of the Dobrin et al reference, the 2-22-08 Final Office Action states at lines 11 – 22 of paragraph 2 on pages 2 – 3, thereof (emphasis added):

> The reference does not disclose forming successive nips between the first roll and multiple second rolls with fins. **Weber et al.** discloses stretching a **laminate** using multiple rolls with ribs which interact with a single roll with grooves. This use of multiple rolls reduces the rate at which the stretching of the laminate is carried out, reducing the strain on the web and causing **less damage to the laminate** than the use of a single roll pair.(Col. 17, ll. 57-Col. 18, ll. 16) It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the single roll pair of first and second roll in Dobrin et al. with multiple roll pairs formed from separate second rolls interacting with the same first roll since this would reduce the strain on the first web as it is stretched and **cause less damage** to the web than the use of the single roll pair of Dobrin et al.(Col. 17, ll. 57-Col. 18, ll. 16)

As explained at column 7, lines 29 – 54 of Dobrin et al, the web 5 is passed between opposed forming rolls 8, 9 that have teeth 22 whose vertices or outermost tips (emphasis added):

> are preferably rounded, as shown in greater detail in FIGS. 3 and 4, **to avoid cuts or tears in the materials**, such as nonwoven web 5, that pass between the rolls.

As quoted above, Dobrin et al already avoids damaging the web by virtue of the rounded tips on rolls 8, 9. Weber et al column 17, line 57 through column 18, line 16 does not say that stretching a laminate using multiple rolls with sharp-verticed ribs which interact with a single roll with mating sharp-verticed grooves as in Weber et al is better at causing less damage to the laminate than Dobrin et al's use of a single roll pair with rounded tips. Thus, there is no substance to support the contention of the Office that multiple Weber et al roll pairs with sharp-verticed ribs "**cause less damage** to the web than the use of the single roll pair of Dobrin et al" with rounded tips.

Why then would the person of ordinary skill employ multiple Weber et al rolls with hand-in-glove mating sharp edged vertices to achieve no better result than Dobrin et al already achieves with a single roll with rounded tips? Thus, the logic employed by the Office to sustain this Section 103 rejection would have the person of ordinary skill add additional Weber et al rolls of different configuration (mating sharp-verticed grooves) to achieve what Dobrin et al already achieves with a single roll with rounded tips. Accordingly, this alleged motivation is exposed as mere pretense to enable the Office to extract from a reference (Weber et al) an element admittedly missing from the primary reference (Dobrin et al).

Applicants further respectfully submit that the person of ordinary skill is not going to apply such teachings of Weber et al to a process like Dobrin et al. As explained at column 9, lines 10 – 38 of Dobrin et al, Dobrin et al pertains to a **non-woven** web 5 that is placed **under tension** in the direction of web movement as the web is passed through the nip between the forming rolls 8, 9. In contrast to Dobrin et al, Weber et al

applies to an **untensioned**, intermittently bonded, zero-strain stretch **laminate**. Weber et al Col. 18, ll. 17 – 20.

As noted above, Weber et al fails to stretch a **nonwoven** web before it becomes part of a laminate. Instead, Weber et al applies to stretching a laminate material that is formed of at least two plies of material that are secured to one another along at least a portion of their coextensive surfaces wherein one of the plies is stretchable and elastomeric while the second ply is elongatable but not necessarily elastomeric. As explained at Weber et al col. 14, lines 7 – 24:

> The backsheet web 5 and topsheet web 6 and the absorbent pads 3 are brought into contact with one another at combining rolls 15. Just prior to the webs and pads coming into contact with one another, additional adhesive is preferably applied to one or both webs which are, for clarity, not shown in FIG 1. The latter adhesive secures predetermined portions of the backsheet, the topsheet and the absorbent pad to one another to form the diaper web 1.
>
> The fully assembled diaper web 1 thereafter preferably proceeds through a pair of bond setting rolls 16, which may require chilling to minimize glue bleed through.
>
> The fully assembled diaper web 1 is then directed through an incremental web stretching employing opposed pressure applicators having three dimensional surfaces which at least to a degree are complimentary to one another system of the present invention, which is shown only schematically as 20 in FIG 1.

Dobrin et al by contrast is concerned with stretching a **nonwoven** fibrous web rather than a **laminate** as described in Weber et al. This difference likely explains why the Dobrin et al inventors did not attempt to take any suggestion from Weber et al to use multiple second rolls with fins to form successive nips with the first roll. Such Weber et al teaching likely was deemed inapplicable to what Dobrin et al was doing. Again, the

implication to be drawn from these facts clearly favors the non-obviousness of what applicants are claiming.

Lines 15 – 21 on page 6 of the 2-22-08 Final Office Action contend that (emphasis added):

> Regarding applicant's argument that Dobrin et al. is directed to a web while Weber et al. is directed to a laminate, the fact that Weber et al. is directed to a laminate does not mean it would not be obvious to use the process with a web. The process offers the advantages of reducing the stress on the web by allowing stress redistribution to the web **reducing the chance of damage** to the web. This appears to be an advantage that would occur regardless of whether the material being stretched was one web or a laminate made of multiple webs bonded together.

However, the above contention's reliance on damage avoidance as reason to pluck the multiple rolls from Weber et al already has been debunked, and thus it can be said that this contention ignores the law and contradicts the facts. The law requires the Office to demonstrate obviousness in the first instance rather than burdening the applicants with demonstrating non-obviousness. The flawed damage avoidance motivation precludes the Office from contending that it has made a prima facie case for obviousness that would shift the burden to the applicants.

Nor does Weber et al place the laminate under **tension** in the machine direction as the laminate is passed through the nip between the forming rolls. Instead of using machine direction tension in the laminate to hold it in place, Weber et al uses suction on the periphery of the laminate. As explained at column 13, lines 44 – 54 of Weber et al (emphasis added):

> Two rolls of elastomeric material 4 are fed under very slight (essentially **"zero-strain"**) tension at

> a speed which provides the desired length of elastomeric patch 4*a* per diaper onto an anvil roll equipped with **vacuum hold down ports (not shown) at its periphery**. Knife 12 makes one cut per diaper and the **substantially untensioned elastomeric** patches 4*a* travel with anvil roll 11 **secured to its periphery by vacuum** until they reach transfer point 13.

However, using suction with a **nonwoven** web like Dobrin et al is not practical, as the nonwoven web is too porous for any reasonable application of suction to be effective. As explained at column 17, lines 16 – 27 of Weber et al (emphasis added):

> If the elastomeric patches 4a were not substantially pervious to the passage of air, it would be necessary to either (a) position the vacuum ports 22 and the overlying honeycomb material 44 just outside the opposed edges of the elastomeric patches 4a so that suction forces could be exerted on the fluid-impervious drawable backsheet web 5 through the fluid-pervious drawable topsheet web 6; or (b) **restrain all three layers** comprising the "zero-strain" stretch laminate portions of the diaper web **by means of suitable clamping apparatus** capable of acting upon the opposed surfaces of the diaper web

Thus, Dobrin et al maintains machine direction tension on the web, and Weber et al does not say that this Weber et al process using multiple pairs of meshing corrugated rolls is carried out by maintaining machine direction tension on the Weber et al laminate as is done in Dobrin et al. These two differences, **nonwoven** versus **laminate** and **machine direction tension** versus **vacuum**, suffice to dissuade the person of ordinary skill from thinking that the Weber et al teachings are applicable to a process like Dobrin et al.

The multiple Weber et al rolls are further flawed in failing to provide a plurality of mating surfaces having fins that are positioned to fit within the grooves of forming

surfaces. Instead, Weber et al provides successive pairs of meshing corrugated rolls, which have opposed surfaces with sharp edged vertices that fit hand-in-glove and thus leave no space between them. Weber et al is compressing the web, otherwise movement of the web in the machine direction over the sharp vertices is bound to slice the web.

Lines 3 – 12 of paragraph 4 on pages 5 – 6 of the 2-22-08 Final Office Action state (emphasis added):

> Regarding applicant's argument that Weber et al. does not disclose a plurality of mating surfaces having fins that fit within the grooves of the forming surface, applicant's own specification describes this in the same manner as Weber et al and **the Figures are the same**. Examiner is uncertain as to what applicant's mating surfaces, etc. look like if they are not as in Figure 3 of the specification, which is **similar** to Figure 2A of Weber et al. Each of the corrugating rolls 24b and 25 have fins that are positioned to enter grooves on the forming surface 23 at separate locations. The two corrugating rollers comprise a "plurality", each with fins which fit into the grooves on the forming surface. The claim does not require the fins to extend around the entire circumference of the roller as the claim does not even require rollers.

However, the meshing surfaces 23, 24a in Weber et al FIG. 2B and 23, 24b in Weber et al FIG. 2C formed on the surfaces of the Weber et al corrugated rolls 25, 27 are manifestly different than the surfaces of the fins 610 shown in applicants' FIG. 4. The meshing surfaces 23, 24a (Weber et al FIG. 2B) and 23, 24b (Weber et al FIG. 2C) formed on the surfaces of the Weber et al corrugated rolls 25, 27 are configured to touch along all surfaces but for the presence of the web 1 between them. The surfaces 208, 210 of the rolls 204, 206 in applicants' FIGS. 3 and 4 would not fit hand-in-glove-

like but for the web 620 between them. That is why Weber et al cannot be deemed to disclose rolls with mating surfaces that have fins fitted within grooves.

Additionally, the 2-22-08 Final Office Action's contention of obviousness is negated by the particular circumstances of the Dobrin et al reference and the Weber et al reference. The Weber et al reference is assigned to the Proctor & Gamble Company and issued in September 1992. The Dobrin et al reference also is assigned to the Proctor & Gamble Company and issued 10 years later in 2002, based on an application filed in 1999. Moreover, the inventors of the Dobrin et al reference cited the Weber et al reference, and thus the Dobrin et al inventors were aware of the disclosure of the Weber et al reference. Nonetheless, as admitted by the Office Action, Dobrin et al failed even to disclose forming successive nips between the first roll and multiple second rolls with fins. Thus, the 2-22-08 Final Office Action's contention that to do so was obvious to the person of ordinary skill is refuted by the fact that the Dobrin et al inventors, who are persons of greater than ordinary skill because they themselves were inventors, failed to appreciate the desirability of the formation of successive nips between the first roll and multiple second rolls with fins in the context of the Dobrin et al invention. As inventors, the Dobrin et al inventors were obligated to disclose the best mode for practicing their invention. If as the Office apparently contends, the Dobrin et al inventors did appreciate the desirability of the formation of successive nips between the first roll and multiple second rolls with fins in the context of the Dobrin et al invention and failed even to mention this fact in their patent application, then the Dobrin et al patent is flawed for failing to disclose the best mode for practicing the invention. If the Office believes that the Dobrin et al patent is so flawed, then why has the Office not

revoked it? Because the Office ignores these facts in arriving at the 2-22-08 Final Office Action's conclusion of obviousness, that conclusion must be deemed clearly erroneous.

At lines 12-14 on page 6 of the 2-22-08 final Office Action, it is contended that:

> The fact that a group of inventors failed to envision a combination does not mean that other skilled in the art when presented with the references would not have envisioned the combination.

This statement misses the point in the following respects. First, it is not merely others **skilled in the art** that provides the standard of comparison. The standard is persons of **ordinary skill** in the art. Second, when it has been factually demonstrated that persons who are inventors, i.e., persons of **greater than ordinary skill** in the art, fail to appreciate applicants' claimed limitations, it becomes clearly erroneous to persist in the contention that the same claimed features would be appreciated by persons of **ordinary skill** in the art.

The 2-22-08 Final Office Action contends at page 3, lines 7 – 19, that (emphasis added):

> Dobrin et al. discloses the adhesive is applied to the stretched web, but is silent as to the specifics of the adhesive applicator, **only indicating that such methods are well known to those in the art. (Col. 21, ll. 23-26, 48-50)** Boger et al. discloses a device for applying adhesive to a diaper via a number of slots onto specific locations on the web. (Abstract; Figure 1) This allows the accurate placement of adhesive with a relatively simple system which requires little maintenance. (Col. 2, ll. 23-31) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a slot applicator lie (sic) that of Boger et al. to apply the adhesive to the corrugated web of Dobrin et al. **since Dobrin et al. indicates well-known types of adhesive applicators can be used** and since the

> adhesive applicator of Boger et al. is a (sic) adhesive applicator known the diapers arts which would allow the accurate placement of adhesive with a relatively simple system which requires little maintenance. (Col. 2, ll. 23-31)

However, Dobrin et al Col. 21, ll. 23-26, 48-50 does not indicate that well-known types of applicators can be used. There, Dobrin et al merely states that the ways that a precursor material can be joined to the nonwoven material at the Dobrin et al joinder station 13 include "thermal lamination, adhesive lamination, direct lamination by extrusion, and vacuum lamination," and that each of **these methods** "is well known to those skilled in the art." Dobrin et al Col. 21, ll. 23-26, 48-50 only indicates that "thermal lamination, adhesive lamination, direct lamination by extrusion, and vacuum lamination" are "well known to those skilled in the art." Dobrin et al does not place a slot coat adhesive process into the category of well-known types of applicators that can be used in the context of the Dobrin et al method.

Moreover, Boger et al does not disclose use of a slot coat adhesive process to apply adhesive directly to a sheet of flexible material. Thus, the 2-22-08 Final Office Action relies on applicants' disclosure for the step of applying adhesive to a flexible sheet of material with a slot coat adhesive process.

Referring to subparagraphs g, h and i of claim 1, applicants' method requires stretching the first flexible sheet material, applying adhesive directly to the stretched first flexible sheet material with a slot coat adhesive process and joining the stretched first flexible sheet material in a face-to-face configuration to the first surface of the second flexible sheet material. Thus, the adhesive is applied to the stretched first flexible sheet material, which thereafter is joined to the second flexible sheet material. Accordingly,

the slot coat adhesive process is used to apply the adhesive directly to the stretched first flexible sheet material.

According to Boger et al, there is no indication that the substrate to which the adhesive is applied is in any way stretchable, much less stretched before the adhesive is applied. A review of Boger et al Fig.1 and the description thereof establishes no apparatus that would in any way stretch the substrate 64 before the adhesive dispensing device 10 supplies hot melt adhesive through its nozzle 20. Nor is substrate 64 stretched before being joined via the adhesive to the non-woven layer 182.

Persons of ordinary skill are unlikely to equate the use of a slot coat adhesive process to apply adhesive to an unstretched web as in Boger et al with the use of a slot coat adhesive process to apply adhesive to a flexible sheet material that has been stretched a plurality of times. Persons of ordinary skill are likely to regard the behavior of glue on an unstretched web to differ from the behavior of glue on a flexible sheet material that has been stretched a plurality of times.

Lines 5-11 on page 7 of the 2-22-08 Final Office Action contend:

> Absent evidence that one in the art would expect application of adhesive to a stretched web to somehow behave differently than application of adhesive to a non-stretched web, this would have been obvious. The desirability of the slot coater of Boger et al. is not affected by whether the web is stretched or unstretched. Examiner does not understand why one in the art would think adhesive would behave differently on a stretched web vs. an unstretched web, and applicant has not provided any evidence to support this assertion.

The reason one of ordinary skill would think adhesive behaves differently on a stretched web versus the behavior of the adhesive on an unstretched web is a simple matter of

differences in density and porosity between these two web configurations. See Dobrin et al column 21, lines 54 – 60. Stretching the same mass of material over a wider area of necessity decreases the density per unit area of the web and hence commensurately increases the porosity of the web. If by the above quoted passage on page 7 of the 2-22-08 Final Office Action the Office means to contend that the person of ordinary skill lacks such modest level of understanding, then that contention of the Office reinforces applicants' contention that such a person of ordinary skill would not have appreciated applicants' claimed invention.

Each of claims 14 – 20 requires using the slot coat adhesive process to apply the adhesive to the contacting peaks of the first flexible sheet material. However, the Boger et al substrate 64 is flat and not corrugated. These differences between the type of process described in Boger et al and the method of claims 14 – 20 contradict the 2-22-08 Final Office Action's contention that using a slot applicator as in Boger et al to apply adhesive to a corrugated web of Dobrin et al would be obvious to one of ordinary skill merely because accurate placement of adhesive with a relatively simple system that requires little maintenance is suggested by Boger et al. Boger et al does not suggest that applying adhesive accurately and simply would be achieved by its apparatus if the substrate were to be corrugated and stretched rather than flat and unstretched. Instead, Boger et al is only concerned with reducing the amount of adhesive required to laminate one sheet to another "so that adhesive is not wasted where the leg holes are cut away." Boger et al column 5, lines 34 – 35. Thus, unlike applicants, Boger et al is not concerned with application of adhesive only on the peaks of the corrugations, which

is a concern with the precise application of adhesive in registry with particular topographical features of the surface.

Applicants therefore respectfully submit that claims 1-11 and 13-20 are patentable under 35 U.S.C. § 103(a) over Dobrin et al (USP 6,383,431) in view of Weber et al (USP 5,143,679) and Boger et al (USP 4,874,451).

B. Claim 12 is patentable under 35 U.S.C. § 103(a) over Dobrin et al in view of Weber et al and Boger et al and further in view of Morman et al

The 2-22-08 Final Office Action contends that stretching of polymeric films before joining to other webs is well known and conventional in the laminating arts to make the film breathable. If this statement is taken as true, then one must ask the question why Dobrin et al did not bother to mention it in connection with stretching in the cross direction to create breathability, which Dobrin et al did mention at col. 20, lines 28-31, as asserted at page 5, lines 5 – 10 of the 2-22-08 Final Office Action. Moreover, this conclusion of the 2-22-08 Final Office Action ignores the other perhaps unwanted effects of stretching in the machine direction, which effects would be appreciated by persons of ordinary skill. Such effects include necking of the web that is being stretched in the machine direction. Because stretching in the machine direction has such necking effects known to persons of ordinary skill, it is not enough for the 2-22-08 Final Office Action to conclude that it would be obvious to do so in the context of applicants' claimed invention without showing why persons of ordinary skill would ignore these other effects and resort to stretching in the machine direction. Morman et al [0011] is not in the context of the present claims, for Morman et al [0011] is stretching a second flexible

sheet material to lend breathability to a film. However, in applicants' claims, it is the first flexible sheet material that is to undergo the stretching.

As Morman et al fails to correct the deficiencies noted above in Dobrin et al, Weber et al and Boger et al, applicants therefore respectfully submit that claim 12 is patentable under 35 U.S.C. § 103(a) over Dobrin et al in view of Weber et al and Boger et al as applied to claim 1, and further in view of Morman et al.

Conclusion

For the reasons explained above, Applicant respectfully submits that claims 1-20 are patentable over the art, the rejections should be reversed, and claims 1-20 should be allowed to issue in a patent.

8. CLAIMS APPENDIX:

1. (Previously presented) A method of producing a laminate material comprising the steps of

a. providing a first flexible sheet material;

b. providing a second flexible sheet material having a first surface and a second surface;

c. providing a forming surface having grooves formed therein;

d. providing a plurality of mating surfaces having fins positioned to fit within the grooves of said forming surfaces;

e. forming successive nips between the forming surface and the mating surfaces wherein the fins of the mating surfaces enter the grooves of the forming surface at separate locations on the forming surface;

f. feeding said first flexible sheet material into the successive nips while maintaining the position of said first flexible sheet material with respect to said forming surface;

g. stretching said first flexible sheet material a plurality of times along lines on the first flexible sheet material by the fins entering the forming surface grooves along with said first flexible sheet material within successive nips;

h. applying adhesive directly to said stretched first flexible sheet material with a slot coat adhesive process; and

i. joining the stretched first flexible sheet material in a face to face configuration to the first surface of the second flexible sheet material.

2. (Original) The method of claim 1 wherein the fins of said successive mating surfaces enter the grooves of respective successive nips to a different degree providing a different amount of stretch to said first flexible sheet material at different nips.

3. (Original) The method of claim 1 wherein said forming surface is a drum and said plurality of mating surfaces are satellite rolls positioned at different locations with respect to said drum.

4. (Original) The method of claim 1 wherein the first flexible sheet material is a nonwoven web.

5. (Original) The method of claim 1 wherein said first flexible sheet material is stretched in the cross-machine direction.

6. (Original) The method of claim 1 wherein said stretching is along lines having a frequency of about 3 per inch to about 15 per inch.

7. (Original) The method of claim 1 wherein said first flexible sheet material, prior to stretching, has a basis weight in the range of from about 10 gsm to about 150 gsm.

8. (Previously presented) The method of claim 1 where the second flexible sheet material is a polymeric film.

9. (Original) The method of claim 8 where the polymeric film is extensible.

10. (Original) The method of claim 8 where the polymeric film is breathable.

11. (Original) The method of claim 8 where the polymeric film is a multi-directional stretch film.

12. (Original) The method of claim 1 further including the step of stretching the second flexible sheet material in the machine direction before it is joined to the stretched first flexible sheet material.

13. (Original) The method of claim 1 where first flexible sheet material, after stretching, has a corrugated surface comprised of a series of surface contacting peaks separated by recessed troughs therebetween and is joined to the second flexible sheet material at discrete points comprising where the series of surface contacting peaks of the stretched first flexible sheet material contact the first surface of the second flexible sheet material.

14. (Original) The method of claim 13 where the adhesive is applied substantially to the series of surface contacting peaks of the first flexible sheet material.

15. (Previously presented) A method of producing a laminate material comprising the steps of

a. providing a first flexible sheet material;

b. providing a second flexible sheet material having a first surface and a second surface;

c. providing a forming surface having grooves formed therein;

d. providing a plurality of mating surfaces having fins positioned to fit within the grooves of said forming surfaces;

e. forming successive nips between the forming surface and the mating surfaces wherein the fins of the mating surfaces enter the grooves of the forming surface at separate locations on the forming surface;

f. feeding said first flexible sheet material into the successive nips while maintaining the position of said first flexible sheet material with respect to said forming surface;

g. stretching said first flexible sheet material a plurality of times in the cross-machine direction along lines on the first flexible sheet material by the fins entering the forming surface grooves along with said first flexible sheet material within successive nips, such that the resulting stretched first flexible sheet material has a corrugated surface comprised of a series of surface contacting peaks separated by recessed troughs therebetween;

h. applying adhesive directly to said first flexible sheet material with a slot coat adhesive process, where the adhesive is applied substantially to the surface contacting peaks of the first flexible sheet material; and

i. joining the stretched first flexible sheet material in a face to face configuration to the first surface of the second flexible sheet material at the discrete points where the surface contacting peaks of the first flexible sheet material contact the first surface of the second flexible sheet material.

16. (Original) The method of claim 15 where the first flexible sheet material is a nonwoven web.

17. (Original) The method of claim 15 where the second flexible sheet material is a polymeric film.

18. (Original) The method of claim 17 where the polymeric film is extensible.

19. (Original) The method of claim 17 where the polymeric film is breathable.

20. (Original) The method of claim 17 where the polymeric film is a multi-directional stretch film.

21. (Withdrawn) A laminate comprising:

a first flexible web having a corrugated surface comprised of a series of surface contacting peaks separated by recessed troughs therebetween, and

a second flexible web,

where the second flexible web is joined to the first flexible web in a face to face configuration at the discrete points where the surface contacting peaks of the first flexible web contact the polymeric film.

22. (Withdrawn) The laminate of claim 21 where the first flexible web is a nonwoven web.

23. (Withdrawn) The laminate of claim 21 where the second flexible web is a polymeric film.

24. (Withdrawn) The laminate of claim 23 where the polymeric film is extensible.

25. (Withdrawn) The laminate of claim 23 where the polymeric film is breathable.

26. (Withdrawn) The laminate of claim 23 where the polymeric film is a multi-directional stretch film.

9. Evidence Appendix:

None.

10. Related Proceedings Appendix:

N/A

Respectfully submitted,

DORITY & MANNING, P.A.

DATED: Oct 10, 2008

James M. Bagarazzi
Reg. No. 29,609
P.O. Box 1449
Greenville, S C 29602-1449
(864) 271-1592